



Approval #

970087-U

Safety & Buildings Division
201 West Washington Avenue
P.O. Box 2689
Madison, WI 53701-2689

Wisconsin Material Approval

Material

Secondary Containment Vessel and Dike

Manufacturer

Lake Shore Burial Vault Company, Inc.
12780 Lisbon Road
Brookfield, WI 53005

SCOPE OF APPROVAL

The concrete containment vessel and dike manufactured by Lake Shore Burial Vault Company, Inc. have been evaluated for use as secondary containment aboveground tank for flammable and combustible liquids in accordance with **sections ILHR 10.345 (1) and ILHR 10.415 (7) (b)** of the Wisconsin Flammable and Combustible Liquids Code.

DESCRIPTION AND USE

Containment Vessel

The containment vessel is designed to provide secondary containment for tanks up to 1,100 gallons capacity.

The containment vessel completely encloses the tank and is made up of a base and cover of steel reinforced precast concrete. Walls are 3 1/2-inches thick and the floor and top are 5 inches thick.

The bottom of the vessel contains a sump connected to a sight port to provide leak detection.

The top of the cover is provided with four openings for fill pipe, vents and suction line as well as a 24-inch diameter access cover. The containment vessel is not designed to be entered.

Openings in the top of the vault are made liquid tight with nitrile rubber sealing strip, which is compatible with petroleum products. This seal must be maintained.

Dike

The Lakeshore dike is designed for use with tanks up to 1100 gallons capacity that have a diameter no longer than 64 inches and a length no greater than 82 inches to allow for visual inspection of the tank in accordance with **s. ILHR 10.415(13)(a)1**.

The dike is made of steel reinforced precast concrete. The walls and floor are 5 inches thick.

The bottom of the dike contains a sump connected to a spring loaded faucet.

TESTS AND RESULTS

Calculations showing the system's capability of withstanding the full hydrostatic head of product from a failed 1,000 gallon tank and showing the ability of the system to provide vehicle collision protection were prepared by Charles E. Menske, P.E., of Milwaukee, Wisconsin.

LIMITATIONS

If used as a part of an aboveground tank system for vehicle fueling, the vault or dike and tank shall be installed in accordance with the capacity, setback, tank design, piping, dispensing, venting, and overfill requirements specified in **s. ILHR 10.415**.

When used as a part of a vehicle fueling system, vehicle collision protection for the containment vessel or dike and the tank must be provided. The manufacturer provides a continuous solid concrete collision barrier, 24 inches high, 36 inches wide at the base and 7 inches wide at the top to be placed around the sides of the containment vessel where collision protection is required. This protection complies with the collision protection requirements of **s. ILHR 10.415 (8)(a)**. The containment vessel or dike itself may provide the vehicle collision protection in accordance with **s. ILHR 10.415 (8)(a)**, where the tank is small enough so that the sides of the vessel or dike are located at least 24 inches away from the tank.

Spill prevention equipment shall be provided in accordance with **s. ILHR 10.415 (12)(a) 1**. Spill containment basins or other equipment to prevent release of product to the environment when the transfer hose is detached or removed from the fill pipe must be provided.

The site port of the containment vessel meets the interstitial monitoring requirements of **s. ILHR 10.415 (13)(a)2**.

The containment vessel itself provides equivalent protection to the fencing and enclosure requirements of **s. ILHR 10.415(5)**. Pumps, nozzles and other dispensing equipment shall not be located in the containment vessel. The containment vessel shall have no use other than protection of the tank system. When the containment vessel is used without a fence or enclosure, all vents, including diesel fuel shall be at least 12' above grade.

Fencing or enclosure in accordance with **s. ILHR 10.415(5)** shall be provided for the dike.

The containment vessel shall not be used to provide secondary containment for waste oil collection points open to the public in accordance with **s. ILHR 10.33**. The dike may be used to provide secondary containment for waste oil collection points open to the public.

This approval will be valid through December 31, 2002, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Building Material Approval Number must be provided when plans that include this product are submitted for review.

DISCLAIMER

The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.

Reviewed by; _____

Approval Date: _____ By: _____

Berni Mattsson, P.E.
Code Development Section
Program Development Bureau